IN THE CLAIMS:

Please amend the claims in the above-identified patent application as follows wherein deleted material is marked with a strikethrough and new material is underlined to show the changes made:

1	1. (Currently amended) A method of extracting electrical	
2	characteristics from an integrated circuit layout, said method comprising:	
3	dividing said integrated circuit layout into at least one extraction sub problem;	
4	identifying a set of physical parameters that define said extraction sub problem	
5	from said integrated circuit layout;	
6	supplying said set of physical parameters to a machine-learning model trained for	
7	said extraction sub problem with Bayesian inference implemented with a	
8	Monte Carlo method; and	
9	calculating at least one electrical characteristic for said extraction sub problem by	
10	analyzing said set of physical parameters with said machine-learning model	
11	trained with Bayesian inference implemented with a Monte Carlo method.	

2. (Original) The method as claimed in claim 1 wherein said electrical
 characteristic comprises capacitance.

1	3. (Original) The method as claimed in claim 1 wherein said electrical		
2	characteristic comprises resistance.		
1	4. (Currently amended) The method as claimed in claim 1 wherein		
2	said extraction sub problem comprises a net in said integrated circuit layout.		
1	5. (Currently amended) The method as claimed in claim 1 wherein		
2	said extraction sub problem comprises a section of interconnect wiring in said integrated		
3	circuit layout.		
1	6. (Currently amended) The method as claimed in claim 1 wherein		
2	one of said set of physical parameters comprises a distance between a pair of interconnect		
3	lines in said integrated circuit layout.		
1	7. (Currently amended) The method as claimed in claim 1 wherein		
2	one of said set of physical parameters comprises a an interconnect wire width in said		
3	integrated circuit layout.		

1	8. (Currently amended) The method as claimed in claim 1 wherein			
2	one of said set of physical parameters comprises a an interconnect wire length in said			
3	integrated circuit layout.			
1	9. (Original) The method as claimed in claim 1, said method further			
2				
3	comprising: selecting said machine-learning model from a plurality of machine-learning			
4	models.			
4	models.			
1	10 (Commental and and and an alaimed in alaim 1 subsensing			
1	10. (Currently amended) The method as claimed in claim 1 wherein			
2	calculating at least one electrical characteristic for said extraction sub problem comprises			
3	determining a capacitance per unit length for a subsection of interconnect wiring			
4	in said integrated circuit layout; and			
5	multiplying said capacitance per unit length by a length of said subsection of			
6	interconnect wiring in said integrated circuit layout.			
1	11. (Currently amended) A computer readable medium, said			
2	computer readable medium comprising an arranged set of computer instructions for:			
3	dividing an integrated circuit layout into at least one extraction sub problem;			
4	identifying a set of physical parameters that define said extraction sub problem			
5	from said integrated circuit layout;			

6	supplying said set of physical parameters to a machine-learning model trained for			
7	said extraction sub problem with Bayesian inference implemented with a			
8	Monte Carlo method; and			
9	calculating at least one electrical characteristic for said extraction sub problem by			
10	analyzing said set of physical parameters with said machine-learning model			
11	trained with Bayesian inference implemented with a Monte Carlo method.			
1	12. (Original) The computer readable medium as claimed in claim			
2	11 wherein said electrical characteristic comprises capacitance.			
1	13. (Original) The computer readable medium as claimed in claim			
2	11 wherein said electrical characteristic comprises resistance.			
1	14. (Currently amended) The computer readable medium as claimed			
2	in claim 11 wherein said extraction sub problem comprises a net in said integrated circuit			
3	layout.			
1	15. (Currently amended) The computer readable medium as claimed			
2	in claim 11 wherein said extraction sub problem comprises a section of interconnect			
3	wiring in said integrated circuit layout.			

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1	16. (Currently amended) The	computer readable medium as claimed			
2	in claim 11 wherein one of said set of physical parameters comprises a distance between a				
3	pair of interconnect line in said integrated circuit layout s.				
4					
1	17. (Currently amended) The	computer readable medium as claimed			
2	in claim 11 wherein one of said set of physical parameters comprises a an interconnect				
3	wire width in said integrated circuit layout.				
1	18. (Currently amended) The	method as claimed in claim 4 11			
2	wherein one of said set of physical parameters co	omprises a <u>an interconnect</u> wire length <u>in</u>			
3	said integrated circuit layout.				
1	19. (Currently amended) The	computer readable medium as claimed			
2	2 in claim 11 wherein said arranged set of compute	er instructions further perform:			
3	selecting said machine-learning model tr	selecting said machine-learning model trained for said extraction sub problem			
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4	model from a plurality of extraction sub problem machine-learning models.				

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1	20. (Currently amended) The computer readable medium as claimed	
2	in claim 11 wherein a subset of computer instructions for calculating at least one	
3	electrical characteristic for said extraction sub problem perform the follow:	
4	determining a capacitance per unit length for a subsection of interconnect wirin	
5	in said integrated circuit layout; and	
6	multiplying said capacitance per unit length by a length of said subsection of	
7	interconnect wiring in said integrated circuit layout.	

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